

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

PLEASE AMEND THE CLAIMS AS FOLLOW:

1. (Currently Amended) A system for producing an integrated display audiovisual presentation, comprising:

a source of a first audiovisual presentation, wherein the first audiovisual presentation comprises at least one reference point and at least one reference object, wherein at least a selected one reference point is associated with a location on a selected one reference object having a placement and orientation,

a source of user audiovisual information wherein the user audiovisual information comprises pixel texture and user object geometry information for user objects representative of user images, said user object geometry information comprising at least one replacement point and at least one replacement object image, wherein at least a selected one replacement point is associated with a location on a selected replacement object image,

correlation processing means responsive to the first audiovisual presentation and the user audiovisual information, for geometrically transforming the user object geometry information to provide transformed user object information responsive to the selected one reference object; correlating at least one selected reference point with at least one selected replacement point,

association means responsive to the correlation means, for associating a selected one reference object with a selected one replacement object image; and

compositing means responsive to the first audiovisual presentation, the user audiovisual information, the association means, the pixel texture, and the transformed user geometry object information correlation means, for reconstructing an appearance of the user object compositing at least one replacement object image with the first audiovisual presentation, producing in the same placement and orientation as the selected one reference object to provide an integrated display audiovisual presentation, wherein at least a selected portion of the replacement object image user image replaces a respective selected portion of the first audiovisual presentation.

2. (Original) The system as in claim 1, wherein the first audiovisual presentation further comprises a video input signal.

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

3. (Original) The system as in claim 2, wherein the video input signal comprises a time-ordered sequence of video images.
4. (Currently Amended) The system as in claim 3, wherein the ~~correlation-processing~~ means further comprises recognition means responsive to the video input signal, for recognizing at least a selected one reference object within at least a selected one video image of the time-ordered sequence.
5. (Original) The system as in claim 4, wherein the recognition means further recognizes at least one reference point on the associated reference object.
6. (Original) The system as in claim 4, wherein the recognition means comprises at least one of pattern recognition means and image recognition means.
7. (Original) The system as in claim 3, wherein the first audiovisual presentation further comprises a reference object information identifying and associated with at least a selected one reference object.
8. (Original) The system as in claim 7, wherein the reference object information further comprises identification of at least one selected reference point on the selected one reference object.
9. (Original) The system as in claim 1, wherein the first audiovisual presentation further comprises a time-ordered sequence of video images digitized and encoded into an encoded digital signal.
10. (Currently Amended) The system as in claim 9,
wherein the encoded digital signal comprises a plurality of Motion Picture
Expert's Group (MPEG) motion vectors, and
wherein the ~~correlation-processing~~ means is further responsive to at least a

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

selected one of the plurality of MPEG motion vectors.

11. (Currently Amended) The system as in claim 3, wherein the ~~correlation~~ processing means further comprises recognition means responsive to the encoded digital signal, for recognizing at least a selected one reference object within at least a selected one video image of the time-ordered sequence.

12. (Original) The system as in claim 11, wherein the recognition means further recognizes at least one reference point on the associated reference object.

A 13. (Currently Amended) The system as in claim 12, wherein the ~~correlation~~ processing means further comprises first-order object transformation means for transforming at least a selected one recognized reference point responsive to the selected one of the plurality of MPEG motion vectors.

14. (Original) The system as in claim 1, wherein the compositing means further comprises image transform means for transforming the selected one replacement object image associated with the selected one reference object.

15. (Original) The system as in claim 14, wherein the image transform means comprises at least one of morphing means, mapping means, stretching means, shrinking means, rotating means, scaling means, zooming means, curling means, shearing means, and distorting means.

Claim 16 is canceled.

17. (Currently Amended) The system as in claim ~~16~~ 1, wherein:

the ~~correlating~~ processing means further comprises recognition means for identifying at least a selected one reference object within the first audiovisual presentation, and

A 2 the compositing means further comprises geometric transformation means for geometrically transforming the user object geometric information responsive to the

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

recognition means.

18. (Currently Amended) The system as in claim ~~16~~ 17, wherein the compositing means further comprises geometric transformation means for geometrically transforming the user object geometric information producing transformed user object geometric information, responsive to the selected one reference object.

19. (Currently Amended) The system as in claim ~~16~~ 17, wherein the replacement object image comprises texture map image data representative of at least one selected user object as viewed from at least one predefined viewing position relative to the selected user object.

20. (Original) The system as in claim 19, wherein the compositing means selects a portion of the texture map image data responsive to the correlation means.

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21. (Original) The system as in claim 20, wherein the compositing means further comprises geometric transformation means for geometrically transforming the user object geometric information producing transformed user object geometric information, responsive to the selected one reference object.

22. (Original) The system as in claim 21, wherein the geometric transformation means further comprises mapping means for mapping the selected portion of the texture map image data onto the transformed user object geometric information producing a replacement object image.

23. (Currently Amended) The system as in claim 3,
wherein the user audiovisual information further comprises a time-ordered sequence of user images; and, the system further comprising:
~~wherein the~~ association means ~~further for~~ selectively ~~associates~~
associating a plurality of the time-ordered sequence of user images each
respectively with selected ones of the time-ordered sequence of video images.

24. (Currently Amended) The system as in claim 12,

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

wherein the first audiovisual presentation further comprises a time-ordered sequence of video masks; and

wherein the ~~correlation~~ processing means further comprises selection means for selecting a portion of the first audiovisual presentation responsive to at least a selected one of the video masks.

25. (Original) The system as in claim 24, wherein the selection means is further responsive to at least a selected one of the MPEG motion vectors.

A² / 26. (Currently Amended) A method for producing an integrated display audiovisual presentation, comprising the steps:

providing a first audiovisual presentation, wherein the first audiovisual presentation comprises at least one reference point and at least one reference object, wherein at least a selected one reference point is associated with a location on a selected one reference object having an orientation and placement;

providing user audiovisual information, wherein the user audiovisual information comprises user object geometry information and pixel texture for at least one replacement point and at least one replacement object image for each of the plurality of user images, wherein at least a selected one replacement point is associated with a location on a selected replacement object image;

geometrically transforming the user object geometry responsive to the orientation and placement for the selected one reference object to provide for correlating at least one selected reference point with at least one selected replacement point; responsive to the first audiovisual presentation and the user audiovisual information;

reconstructing an appearance of the selected user object to appear in the same placement and orientation as the selected one reference object responsive to the respective transformed user object geometry and to the respective pixel texture

~~associating a selected one reference object with a selected one replacement object image responsive to the correlation; and~~

~~compositing at least one replacement object image with the first audiovisual presentation, responsive to the first audiovisual presentation, the user audiovisual~~

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

~~information, the associating, and the correlation,~~ for producing an integrated display audiovisual presentation, wherein at least a selected portion of the replacement object image replaces a selected portion of the first audiovisual presentation.

27. (Currently Amended) The method as in claim 26, wherein the ~~correlation~~ correlating further comprises the method of recognizing at least a selected one reference object within an image of the first audiovisual presentation.

28. (Original) The method as in claim 27, wherein the recognizing further comprises the method of recognizing at least one reference point on the associated reference object.

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29. (Original) The method as in claim 27, wherein the recognizing further comprises at least one of the methods of pattern recognition and image recognition.

30. (Currently Amended) The method as in claim 28, wherein the first audiovisual presentation comprises encoded digital signal comprising a plurality of Motion Picture Expert's Group (MPEG) motion vectors, and wherein the ~~correlation-geometrically transforming~~ further comprises the method of transforming at least a selected one recognized reference point responsive to a selected one of the plurality of MPEG motion vectors.

31. (Currently Amended) The method as in claim 26,
wherein the ~~compositing-reconstructing~~ further comprises the ~~method of~~
transforming the selected one replacement object image associated with the selected one reference object;

wherein the transforming is at least one of the methods of morphing, mapping, stretching, shrinking, rotating, scaling, zooming, curling, shearing, and distorting.

32. (Currently Amended) The method as in claim 26,
~~wherein the user audiovisual information further comprises user-object geometric~~
~~information;~~

wherein the ~~correlating-reconstructing~~ further comprises the method of

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

recognizing at least a selected one reference object within the first audiovisual presentation; and

wherein the compositing further comprises the method of transforming the user object geometric information responsive to the recognizing, producing transformed user object geometric information.

33. (Currently Amended) The method as in claim 32,

wherein the replacement object image comprises texture map image data representative of at least one selected user object as viewed from at least one predefined viewing position relative to the selected user object; and

wherein the ~~compositing-reconstructing~~ further comprises the method of selecting a portion of the texture map image data responsive to the correlation.

34. (Currently Amended) The method as in claim 33, wherein the ~~compositing-reconstructing~~ further comprises the method of mapping the selected portion of the texture map image data onto the transformed user object geometric information, producing a replacement object image.

35. (Currently Amended) The method as in claim 26,

wherein the first audiovisual presentation further comprises a time-ordered sequence of video images;

wherein the user audiovisual information further comprises a time-ordered sequence of user images; and

~~wherein the association further comprises the method of the method further comprising~~ selectively associating a plurality of the time-ordered sequence of user images each respectively with selected ones of the time-ordered sequence of video images.

36. (Currently Amended) The method as in claim 30, wherein the first audiovisual presentation further comprises a time-ordered sequence of video masks; and

wherein the ~~correlation-correlating~~ further comprises the method of selecting a

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

portion of the first audiovisual presentation responsive to at least a selected one of the video masks and at least a selected one of the MPEG motion vectors.

37. (Currently Amended) A system for providing an integrated display audiovisual presentation, said system comprising:

means for providing a first audiovisual presentation comprising a selected portion having an orientation and placement and having at least one reference point associated with a location on a selected one reference object and at least one reference object having at least a selected portion of a selected replacement object image having a pixel texture and user object geometry information, and associated with at least a selected one replacement point;

means for geometrically transforming the user object geometry information to provide transformed user object geometry information responsive to the orientation and placement of the selected portion;

image integration means for replacing the selected one reference object is replaced with a selected one replacement object image and integrating the replacement object image into the first audiovisual presentation with the equivalent orientation and placement of the selected portion responsive to an association determined responsive to a the transformed user object geometry information and the pixel texture, and to correlation of at least one selected reference point with at least one selected replacement point.

38. (Original) The presentation system as in claim 37, wherein the correlation is responsive to recognizing at least a selected one reference object within the first audiovisual presentation.

39. (Original) The presentation system as in claim 38, wherein the recognizing is at least one of pattern recognition and image recognition.

40. (Original) The presentation system as in claim 37, wherein the first audiovisual presentation comprises encoded digital signal comprising a plurality of Motion Picture Expert's Group (MPEG) motion vectors, and wherein the correlation is further responsive to a selected one of the plurality of MPEG motion vectors.

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

41. (Original) The presentation system as in claim 37, wherein the selected one replacement object image is transformed by at least one of morphing, mapping, stretching, shrinking, rotating, scaling, zooming, curling, shearing, and distorting prior to the replacing.

42. (Original) The system as in claim 37, wherein the replacement object further comprises user object geometric information that is transformed, producing transformed user object geometric information, responsive to the recognition of at least one selected reference object within the first audiovisual presentation, prior to the replacing.

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43. (Original) The system as in claim 37,
wherein the replacement object image is a selected portion of a texture map image; and
wherein the texture map image data is representative of at least one selected user object as viewed from at least one predefined viewing position relative to the selected user object.

44. (Original) The system as in claim 43, wherein the selected portion of the texture map image is mapped onto transformed user object geometric information, prior to the replacing.

45. (Currently Amended) The system as in claim 37,
wherein the first audiovisual presentation further comprises a time-ordered sequence of video images, and the system further comprising:
means for wherein the association further selectively associates associating a
plurality of replacement object images each respectively with selected ones of the time-ordered sequence of video images prior to the replacing integration.

/ Claims 46-55 are withdrawn as non-elected.

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56. (New) The system as in claim 37,
wherein the audiovisual presentation is comprised of a plurality of frames, at least

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

of two of the frames having a respective selected portion, the system further comprising:
analysis means for selectively tracking the respective selected portions of
a plurality of the frames of the audiovisual presentation and identifying and
selecting corresponding respective ones of the user images, and
wherein the image integration means is responsive to the analysis means
for selectively substituting into the audiovisual presentation the corresponding
respective ones of the user image for the respective selected portions of the
plurality of frames.

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/ 57. (New) A method of providing an integrated display audiovisual presentation, the method comprising:

providing an audiovisual presentation comprising at least a selected portion and
having at least one reference point associated therewith, and having a defined orientation;

providing at least two user images each having a defined user image orientation
and each user image having a pixel texture and a user object geometry;

identifying and selecting one of the user images as a selected replacement for the
selected portion responsive to analysis of the defined reference orientation and the
defined user image orientations;

replacing the selected portion with the selected one of the user images responsive
to the analysis, and to an association determined responsive to correlation of at least one
selected reference point of the reference object with at least one selected replacement
point of said one user image.

58. (New) The method as in claim 57,

selectively tracking the respective selected portions comprising at least two of the
frames of the audiovisual presentation;

identifying and selecting corresponding respective ones of the user images,

geometrically transforming the user object geometry to provide transformed user
object geometry, responsive to the defined orientation,

providing for each frame a replacement user image for integration into the
audiovisual presentation responsive to the texture map and the transformed user object

PATENT APPLICATION
Serial Number: 09/723,169
Attorney Docket Number: STD 1684

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geometry; and

substituting the corresponding respective ones of the user image for the respective
selected portions of the plurality of frames into the audiovisual presentation.
